### (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

#### (19) World Intellectual Property Organization

International Bureau



## 

(43) International Publication Date 14 October 2004 (14.10.2004)

PCT

# (10) International Publication Number WO 2004/088349 A1

(51) International Patent Classification<sup>7</sup>: H04B 1/10

G01S 5/02,

(21) International Application Number:

PCT/AU2004/000419

(22) International Filing Date: 30 March 2004 (30:03.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 2003901463

31 March 2003 (31.03.2003)

(71) Applicant (for all designated States except US): LOCATA CORPORATION [US/US]; 9 Island view, Irvine, CA 92604 (US).

(72) Inventor; and

(75) Inventor/Applicant (for US only): SMALL, David [AU/AU]; Unit 63, 13-15 Sturt Avenue, Griffith, ACT 2603 (AU).

(74) Common Representative: SMALL, David; Locata Corp, 401 Clunies Ross ST, Acton, ACT 2601 (AU).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

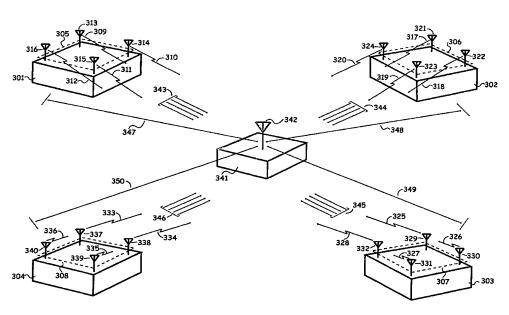
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PF, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

#### Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: A SYSTEM AND METHOD FOR MULTIPATH MITIGATION USING CLUSTERED POSITIONING SIGNALS



(57) Abstract: A diversity system for positioning systems is disclosed, whereby a plurality of positioning signals, which are transmitted and/or are received from substantially the same location, are received and interpreted by an observing receiver. The observing receiver is configured to compare and then select substantially coherent positioning signals, and/or create a best-fit estimate of the measured positioning signals, such that accurate position measurements can be determined in multipath-affected environments.